

REMARKS

In the Response to the Office Action mailed April 29, 2008 Applicant has carefully reviewed the rejections and objections raised in the Office Action and herewith presents new claims 138 to 157 that define the invention of the present application in more specific terms, particularly pointing out and distinctly claiming the novel and unobviousness of the present invention, and clearly distinguishing from the prior art cited and applied against the claims previously in the case. Claims 1-97 stand cancelled, claims 98 to 117 are withdrawn, claims 118 to 137 are cancelled.

In response to the claim rejections, a new set of amended claims 138 to 157 is submitted to better define the invention and to overcome the rejections under 35 U.S.C.103(a) and 112, second paragraph.

The contention that the limitation of "5 l/hr to about 50 l/hr" is not disclosed in the specification is refuted by reference to paragraphs 28 and 78 of the specification, which disclose this limitation.

Claims 118-121, 124-126, 128-131 and 134-136 were rejected as being unpatentable over Terrell et al (US 6,578,828). Terrell et al discloses a livestock cooling system comprising a fan and pressure control means coupled to means for injecting water under high pressure into an air stream to create a fog for controlling the output pressure. The structure for injecting water under high pressure into the air stream is a mist ring to which a plurality of nozzles is attached. The mist ring is disposed near the outer radial end of the fan blades, and therefore, water droplets are injected into the periphery of the air stream, requiring a high pressure level to propel the water droplets through the air stream to the animal target, if, in fact, the water droplets can at all impinge the target animal. Since the mist stream of Terrell et al is surrounds the air stream and is not centrally confined within the air stream (as taught by the present invention), some of the mist stream will invariably be dispersed outwardly from the air stream and not impinge the target animal. From the structure for injecting water under high pressure into an air stream as disclosed and taught by Terrell et al, it is

immediately apparent that Terrell et al did not intend to generate a mist stream into a centrally located low pressure portion of the air stream, in accordance with the limitations recited in independent new claims 138 and 148 of the present invention added by this amendment. These limitations are completely absent from Terrell et al.

In contrast to the teachings of Terrell et al, as claimed in the new claims added by this amendment the limitations express that the nozzles of the present invention are located near the central axis of the air stream, and the mist stream generated thereby is therefore injected into a low pressure portion formed within the air stream along its central axis. These limitations are recited in new independent claims 138 and 148. Further limitations recited in new claims 138 and 148 include that the mist stream is entrained by the air stream to the animal target, and a liquid pressure of only 3 to 6 atmospheres is required to generate a coherent mist stream and to direct the mist stream to an animal target. The significance of these limitations will become evident when one realizes that the structure of Terrell et al for injecting water requires a liquid pressure of 500 to 1200 psi, see column 6, line 13 of this reference document. This is approximately 10 to 20 times greater than the required and claimed pressure level of the present invention.

The cooling system of Terrell et al therefore requires expensive equipment, such as a compressor to produce this high water pressure, as well as, expensive nozzles and water lines that can withstand the high pressure, e.g. made of steel. In contrast, the present invention as claimed eliminates these parts while producing greater function. The water lines according to the present invention can be made, for example, of inexpensive PVC. Also, the high liquid pressure generated by Terrell et al presents a safety hazard to humans, as well as to animals, during a period of equipment malfunction. Furthermore, an inordinate amount of water is wasted by the cooling system of Terrell et al, particularly since the air stream cannot confine the atomized fluid discharged from the nozzles to a limited lateral dimension since it is injected into the periphery of the air stream, and therefore Terrell et al cannot generate a mist stream of a controllable lateral dimension at an animal target. Another cause to the wastage of

water is that the mist ring of Terrell et al employs excessive nozzles, eight nozzles as illustrated in Fig. 2 of Terrell et al. The present invention, as now claimed, is capable of achieving greater function using less nozzle, i.e. only four nozzles are required when a single liquid inlet is employed, as illustrated in Fig. 4a of the present invention.

As claims 138 and 148 are clearly patentably distinguished from Terrell et al, the corresponding dependent claims, which include all the limitations of claims 138 and 148, are also patentable.

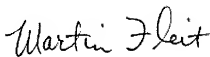
Claims 122-123, 127, 132-133 and 137 were rejected as being unpatentable over Terrell et al in view of Roach et al (US 6,257,501). Roach et al discloses an electric fan having a ring-shaped mister manifold, which has a curvature that is concentric with a rotational center of rotary fan blades and is affixed to the fan guard grill on the front side of the fan body at a location closer to an outer boundary of the electric fan than to the central hub. The fan is pivotally connected on diametrically opposite sides to a connection structure, which is raised by a pole from a base structure. The mister manifold has a hollow body, and pressurized fluid is conveyed via a flexible hose to the hollow body. The fluid is projected from a plurality of nozzles, and is propelled forward by the air currents produced by the rotating blades to produce a fluid mist cloud.

The apparatus of Roach et al produces a large-area fluid mist cloud (column 1, line 43) that is dispersed throughout the air stream. The disadvantages described with respect to Terrell et al are also applicable to Roach et al. The dependent claims, containing all the limitations of Claims 138 and 148 are therefore patentable.

In view of the above amendments and remarks, favorable reconsideration and allowance of the application are respectfully requested. This application should be in condition for allowance, and early passage of this case to issue is respectfully requested. If there are any questions regarding this amendment or the application in general, a telephone call to the undersigned would be appreciated since this should expedite the prosecution of the application for all concerned.

No fee is believed to be due for this submission. It is respectfully requested that, if necessary to effect a timely response, this paper be considered as a Petition for an Extension of Time, time sufficient, to effect a timely response, and shortages in this or other fees, be charged, or any overpayment in fees be credited, to the Deposit Account of the undersigned, Account No. 500601 (Docket no. 7640-X04-019).

Respectfully submitted,

A handwritten signature in black ink that reads "Martin Fleit". The signature is written in a cursive style and is positioned above a horizontal line.

Martin Fleit, Reg. #16,900
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